



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,911	09/04/2003	Jeffery A. Whiteford	40-003300US	8639
22798	7590	01/12/2006	EXAMINER	
QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C.				DIXON, MERRICK L
P O BOX 458				ART UNIT
ALAMEDA, CA 94501				PAPER NUMBER
				1774

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/656,911	WHITEFORD ET AL	
	<b>Examiner</b>	<b>Art Unit</b>	
	Merrick Dixon	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 24 October 2005.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-42 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

*Merrick Dixon*  
**MERRICK DIXON**  
**PRIMARY EXAMINER**

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 8-18-05/7/6/04/2/17/04
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

1. Applicants' election of claims 1-42 of 10-24-05 , is acknowledged.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6,8-12,31 and 37-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Majumdar et al(US 6882051 B2).

The cited reference teaches the claimed composition comprising an aligned, plurality of elongated structurally ordered nanowires in a matrix- col 5, lines 28-32; fig.30.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13-28,30-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Majumdar et al(US 6882051 B2) in view of Pinnavaia et al(US 6983093).

The primary reference apparently fails to teach the aspect of its composition possessing functional portions . The secondary reference to Pinnavaia et al, however, teaches similar types composition as the primary reference with this aspect- col 7, lines 18-43. it would have been obvious to one of ordinary skill in the art at the time the invention is made to combine the teachings of the secondary reference to Pinnavaia et al and provide such aspect to the primary reference to impart desired characteristics to the composition- see col 7, lines 29-30 of the secondary reference.

6. Claims 19-28,30,32,33 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pinnavaia et al and Majumdar et al as applied to claims 13-28,30-36 above, and further in view of Ying et al(US 5958367). Ling et al teaches that it is known in the art to include interacting ligand members on compositions as taught by the obvious combined teachings of the above references. Concerning claims 20,21,31,32, the aforesited references teaches similarly claimed nanostructures as discussed above, *inter alia*.

7

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aksay et al(US 6228248 B1),Tsapatsis et al(US 6863983 B2),Gin et al(US 5849215) and Scher et al(US 6878871 B2) are cited of interest for their respective teachings as set forth and additionally to show the state of the art.

8.

Applicants who wish to send a facsimile (draft copies) for the examiner's immediate review can do so by using the Examiner's personal fax number at 571-273-1520. The faxing of all papers must conform with the notice published in the Official Gazette, 1096 O.G. 30 ( November 15, 1989). **NOTE: All facsimiles sent to the examiner's personal fax number should be in draft-forms and will be treated as informal.**

**Same facsimiles will not be entered in the related applications unless otherwise agreed and noted by the examiner.**

**The fax number for all other fascimile is 571-273-8300.**

Information about the status of an application may be obtained from the Patent Information Retrieval system (**Private PAIR**).

Status inquires for published applications may be retrieved from either **Private PAIR** or **Public PAIR**. Questions about the PAIR system should be directed to the Electronic Business Center at **866-217-9197**.

Any questions concerning the instant communication should be directed to Examiner Dixon, at 571-272-1520, Mondays, Wednesdays and Thursdays, between 12 noon and 8 PM, eastern time .



Merrick Dixon

Primary Examiner

Group 1700